

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) Multicapillary electrophoresis system comprising a plurality of juxtaposed capillaries, at least one source for the emission of a beam intended to excite molecules lying in its path and inside the capillaries and means for detecting the fluorescence of the molecules excited by said beam, wherein said means are arranged so as to detect the light which emerges at the exit of said capillaries and which propagates along the direction in which said capillaries extend, the resolution of the detection means is high enough to distinguish the light which emerges at the exit of each of the capillaries, and ~~the~~ refractive index of ~~the~~ media outside of the capillaries is equal or superior to that of the medium inside of the capillaries.

2. (Currently Amended) The multicapillary electrophoresis system according to claim 1, wherein the resolution of the detection means is high enough to distinguish the light which emerges at the exit of each of the capillaries from that coming from the walls of the ~~latter~~ capillaries and/or from ~~the~~ medium which surrounds them capillaries.

3. (Currently Amended) The multicapillary electrophoresis system according to claim 1, ~~further including~~ said plurality of juxtaposed capillaries forming at least one linear array.

4. (Currently Amended) The multicapillary electrophoresis system according to claim 1, wherein the excitation beam is of elongate cross section and strikes several juxtaposed capillaries simultaneously.

5. (Currently Amended) The multicapillary electrophoresis system according to claim 3, further including means for producing multiple focusing of a beam on a linear array of capillaries.

6. (Currently Amended) The multicapillary electrophoresis system according to claim 3, wherein the beam exiting the side of one capillary of one linear array is focused onto the adjacent juxtaposed capillary within ~~the~~ another following linear array of capillaries following the at least one linear array of capillaries.

7. (Currently Amended) The multicapillary electrophoresis system according to claim 6, wherein ~~the~~ a space between the capillaries is filled, at least along the path of the excitation beam, with ~~a the material media, wherein the media whose~~ has a refractive index ~~is~~ chosen so that the excitation beam does not diverge after having traveled through a capillary.

8. (Previously Amended) The multicapillary electrophoresis system according to claim 5, wherein said material is transparent and non-fluorescent.

9. (Currently Amended) The multicapillary electrophoresis system according to claim 1, further including means for filling the capillaries with a separating matrix, said means including applying pressure in a detection cuvette, ~~where~~ the pressure applied to the detection cuvette allows the capillaries to be filled with ~~a the~~ separating matrix.

10. (Currently Amended) The multicapillary electrophoresis system according to claim 1, further including dispersion means for spatially separating ~~the~~ various fluorescence wavelengths of the light exiting the capillaries.

11. (Previously Amended) The multicapillary electrophoresis system according to claim 1, wherein the detection means provide a complete image of the light exiting the capillaries.

12. (Currently Amended) The multicapillary electrophoresis system according to claim 1, wherein the detection means ~~further includes detection means of~~ is ~~the a~~ charge-coupled device (CCD)-type ~~and, as well as beam focusing means~~.

13. (Currently Amended) The multicapillary electrophoresis system according to claim 1, wherein the detection means ~~further includes detection means of~~ is ~~the a~~ charge-coupled device (CCD)-type, ~~as well as~~ and a fiber bundle interposed between the exits of the capillaries and the ~~detection means of the charge-coupled~~ CCD device type.

Claims 14-15 (Canceled)

16. (Currently Amended) The multicapillary electrophoresis system according to claim 1 wherein the portion of the outside of the wall of the capillaries between the impact of the excitation beam and the end of the capillaries is ~~turned black~~blackened.

17. (Previously Amended) The multicapillary electrophoresis system according to claim 16 wherein the capillaries are glued on a support.

18. (Previously Amended) The multicapillary electrophoresis system according to claim 17, wherein the capillaries are glued on the support using a non transparent glue.

19. (Currently Amended) The multicapillary electrophoresis system according to claim 1, wherein ~~one end of the capillaries is placed in a cell under pressure and the capillaries are fixed on a support by~~with glue and one end of the capillaries is disposed in a cell under pressure, said glue suitable to resist the internal pressure of the cell.

20. (Previously Amended) The multicapillary electrophoresis system according to claim 1, wherein the distance between the impact of the excitation beam on the capillaries and the end of the capillaries is between 6 to 30 times the internal diameter of the capillaries.

21. (Previously Amended) The multicapillary electrophoresis system according to claim 1, wherein a mirror is facing the source on the side of the capillaries which is opposed to said source.

22. (Currently Amended) The multicapillary electrophoresis system according to claim 5, wherein said means for producing multiple focusing of the beam on a~~the~~ linear array of capillaries comprises microlenses positioned juxtaposed to the linear array of capillaries.

23. (Currently Amended) A multicapillary electrophoresis system comprising:
a plurality of juxtaposed capillaries,

at least one source for the emission of a beam intended to excite molecules lying in its path and inside the capillaries and means for detecting the fluorescence of the molecules excited by said beam, wherein said means are arranged so as to detect the light which emerges at the exit of said capillaries and which propagates along the direction in which said capillaries extend, the resolution of the detection means is high enough to distinguish the light which emerges at the exit of each of the capillaries, and the portion of the outside of the wall of the capillaries between the impact of the excitation beam and the end of the capillaries is ~~turned~~ blackened.

24. (Previously Presented) The multicapillary electrophoresis system according to claim 23, wherein the resolution of the detection means is high enough to distinguish the light which emerges at the exit of each of the capillaries from that coming from the walls of the latter and/or from the medium which surrounds them.

25. (Previously Presented) The system according to claim 23, further including said plurality of juxtaposed capillaries forming at least one linear array.

26. (Previously Presented) The system according to claim 23, wherein the excitation beam is of elongate cross section and strikes several juxtaposed capillaries simultaneously.

27. (Currently Amended) The system according to claim 25, further including means for producing multiple focusing of a beam on a linear array of capillaries.

28. (Previously Presented) The system according to claim 25, wherein the beam exiting the side of one capillary of one linear array is focused onto the adjacent juxtaposed capillary within the following linear array.

29. (Currently Amended) The system according to claim 28, further including wherein the ~~a~~ space between the capillaries is filled, at least along the path of the excitation beam, with a material whose refractive index is chosen so that the excitation beam does not diverge after having traveled through a capillary.

30. (Previously Presented) The system according to claim 29, wherein said material is transparent and non-fluorescent.

31. (Currently Amended) The system according to claim 23, further including means for ~~applying filling the capillaries with a separating matrix, said means including applying~~ pressure in a detection cuvette, ~~where the applied~~ pressure allows the capillaries to be filled with ~~a~~ separate matrix.

32. (Currently Amended) The system according to claim 23, further including dispersion means for spatially separating ~~the various fluorescence wavelengths of the~~ light exiting the capillaries.

33. (Previously Presented) The system according to claim 23, wherein the detection means provide a complete image of the light exiting the capillaries.

34. (Currently Amended) The system according to claim 23, wherein the detection means ~~further includes detection means of the~~ is a charge-coupled device (CCD) ~~type, as well as~~ with focusing ~~means~~ capability.

35. (Currently Amended) The system according to claim 23, wherein the detection means ~~further includes detection means of the~~ is a charge-coupled device (CCD) ~~type, as well as~~ and a fiber bundle interposed between the exits of the capillaries and the ~~detection means of the charge-coupled device (CCD) type~~.

36. (Currently Amended) The system according to claim 23, wherein the refractive index of ~~the~~ a media outside of the capillaries is less to that of ~~the~~ a medium inside of the capillaries.

37. (Currently Amended) The system according to claim 23, ~~wherein~~ further including the capillaries are glued on a support using a non-transparent glue.

38. (Previously Presented) The system according to claim 23, wherein the distance between the impact of the excitation beam on the capillaries and the end of the capillaries is between 6 to 30 times the internal diameter of the capillaries.

39. (Previously Presented) The system according to claim 23, wherein a mirror is facing the source on the side of the capillaries which is opposed to said source.

40. (Currently Amended) The system according to claim 27, wherein said means for producing multiple focusing of a beam on a linear array of capillaries comprises microlenses positioned juxtaposed to the linear array of capillaries.